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Accounting for Heritage Assets: Does measuring economic value ‘kill the cat’?

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Abstract

Recent changes in accounting directives for heritage assets held by government, local authorities and charities in the UK required their recognition in the financial statements and the measurement of their economic value. Subsequently, numerous sales of heritage assets by local authorities have occurred. We examine the intrusion of economic value into the realm of cultural assets and investigate two cases: the National Portrait Gallery and Tower Hamlets Council. The observation of economic and cultural value is considered. The National Portrait Gallery largely resisted the pressure to place economic values on its collections of portraiture and continues to increase its extensive collections. The London council in a deprived borough, Tower Hamlets, followed the Code of Practice on local authority accounting regarding recognition and valuation of assets and decided to sell its major heritage asset, a Henry Moore sculpture. We examine how measuring value can affect the observed reality: did the very act of measuring a heritage asset in financial terms change the situation? We develop a frame of analysis based on scientific observation theory applied within the socially constructed world of accounting. Accounting constructed a 'reality' (Hines, 1988) that included items of economic value that were primarily held for their cultural properties, but observing (measuring) their economic value may affect the perception of the cultural value of the item. Drawing on quantum physics we borrow from Schrödinger's thought experiment, commonly referred to as 'Schrödinger's cat', and from Heisenberg's uncertainty principle to suggest that though not killing the cat, observation of the economic value of an accounting element can lead to a change in the perceived cultural value. Thought experiments from quantum physics can provide new ways of exploring the measurement (observation) of different values. Precision in measuring one attribute can cause the perception of other attributes (values) to change. This is particularly important as accounting moves to reporting on an integrated value approach (International Integrated Reporting Council, 2013).

Key words: Heritage assets, cultural value, accounting measurement, economic value, observation theory, Schrödinger's cat.

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1 Introduction

Historically heritage assets were invisible on the financial statements of UK government bodies and charities. In recent years there have been moves to include these cultural assets in the annual financial statements; firstly through disclosure and, more recently, on the balance sheet. But the measurement of the value of heritage assets is fraught with difficulties. There are many kinds of value, (economic, cultural, political, aesthetic and so on), and different measurement tools. Moreover, values change over time and are strongly shaped by contextual factors such as economic opportunities and cultural trends.

Accounting determines what is recognized in the financial statements: the boundaries and the items included are set out in accounting standards and underlying conceptual frameworks: ‘in communicating reality we construct reality’ (Hines, 1988). It is also understood both in the physical sciences and social sciences that observation or the act of measuring can change the perception of the object being measured. Heritage assets have both an economic value and a cultural value; but does the very act of measuring the economic value affect the cultural value and the observed reality?

This paper proceeds as follows: in section 2 we investigate the controversy in the literature on accounting for heritage assets before setting out how accounting treatment has developed for government and charities in the UK. In Section 3 we develop our frame of analysis drawing on both the socially constructed accounting world and scientific theories of observation. The scientific measurement of ‘difficult-to-observe’ properties of physical phenomena is seen as analogous to the challenges of measuring the economic and cultural values of heritage assets. In Section 4 we describe our method and in Section 5 we proceed to explore the application of our research frame to two case study organisations: a public art gallery and a local authority. Lastly, Section 6 comprises a discussion and interpretation of our findings and in Section 7 we draw some final conclusions.

2 Accounting controversy

2.1 The recognition of heritage assets

The UK Accounting Standards Board (ASB) provided the following definition of a heritage asset in Financial Reporting Standard (FRS) 30 (ASB, 2009, p.2):

A tangible asset with historical, artistic, scientific, technological, geophysical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture.

In the recently issued FRS102, (Financial Reporting Council, (FRC), 2013), which applies to the UK and the Republic of Ireland the definition is modified to also include intangible assets. In adding ‘intangible’ to the definition the FRC suggested digital libraries could also be regarded as heritage assets. The ASB clearly considered heritage assets as

accounting assets. The *intent* of the holder is to contribute to knowledge or culture. These *benefits*, in the form of the service potential that heritage assets provide from their contribution to knowledge and culture, are the value in use rather than *cash flows*, thereby allowing them, in the ASB's view, to satisfy the definition of an asset as reinterpreted for public benefit entities (ASB, 2007). Heritage assets do not follow the conventional accounting asset definition in the ASB's conceptual framework (ASB, 1999a), but the later reinterpretation for public benefit entities (ASB, 2007). Heritage assets have particular characteristics: they have long lives (which can span over millennia e.g. Stonehenge); they are often unique or irreplaceable; they are often donated and are sometimes inalienable (they cannot be sold, usually because of a legal restriction).

The merits or otherwise of recognising heritage assets in the financial statements of charities and public sector entities has been the subject of much academic and professional debate. The recognition of assets in public sector financial statements is consistent with the principles of New Public Management (NPM), where public sector organisations draw on management practices from the private sector, including those from accounting, to drive greater efficiency and effectiveness and to enhance managerial accountability (Hood, 1991; Hood, 1995; Lapsley, 2009). Some academic writers support this view vis-à-vis heritage assets. Micallef and Peirson (1997) argue that heritage assets, in line with other assets, should be recognised and included in the financial statements. In a similar vein, Rowles (1992) argues that heritage assets are no different to other assets, such as plant, which may have no market value but are still required to be included in the financial statements.

However, in one of the earliest contributions to the literature Mautz (1988) used the example of the Washington Monument¹ to argue against the recognition of heritage assets in financial statements. The Monument, he maintained, represented an obligation for future cash outflows rather than inflows (Mautz, 1988, p.123) and therefore was more characteristic of a liability than an asset. Further, Carnegie and Wolnizer (1995, 1996) argue that, as heritage assets often cannot be sold, they should not be matched against liabilities, and they cannot be valued in monetary terms. These fundamental challenges to the recognition of heritage assets are developed further by Barton (2000, p.231) who argues that the government is often only the custodian of heritage assets:

The government holds the heritage assets in trust for present and future generations and has a responsibility to protect and preserve them. The costs of protecting and maintaining them should be borne by each generation as they enjoy the benefits from them. As trust assets, public heritage assets should not be included in the government's own statement of assets and liabilities.

¹ The Washington Monument is an obelisk on the National Mall in Washington DC built to commemorate George Washington, the first US president. The monument is both the world's tallest stone structure and the world's tallest obelisk, standing 555 feet 5 1/8 inches (169.294 m) tall. (<http://washington.org/DC-guide-to/washington-monument>)

Barton goes on to regard them as public goods: they are often non-excludable and non-rival: all can enjoy them and one person enjoying them does not prevent others (Barton, 2000; Barton, 2005). The criticism of the accounting for heritage assets is related to the introduction of private sector accounting practice into the non-profit sector as part of New Public Management (NPM) inspired reforms. Private sector accounting cannot adequately address the issues raised by the provision of public goods and services (Ellwood, 2009) where there are other perceptions of value than the economic. This latter theme is also picked up by Ferri and Zan (2014) and Zan (2002) in their reviews of managerial practice and the role of accounting in the management (or mismanagement) of significant cultural assets such as the city of Pompeii. Heritage assets such as these, that have a social and/or cultural purpose, are considered by Pallot (1990) to be community assets, with benefits in the form of services, such as enhanced education, rather than cash flows. They should therefore be subject to a separate form of accounting. Pallot's challenging of the nature of ownership of heritage assets raises the more fundamental question as to the role and purpose of public sector and charity financial statements. Ellwood (2003), Ellwood and Newbury (2006), Barton (2004) and Hodges and Mellett (2003) have all questioned the appropriateness of adopting modes of accounting in the public sector which have been developed primarily to address the information needs of shareholders in firms whose primary objective is to increase their financial wealth.

Further, although an underlying principle of NPM reform is the need for enhanced accountability, many question whether, in the case of heritage assets, this accountability can be effectively or appropriately delivered by recognising them in the financial statements. In order to recognise an item in the financial statements it must meet the definition of an element and be capable of being measured reliably. But can heritage assets be measured reliably in economic terms? And is it sufficient to measure items not held for future economic benefit solely in economic terms? Moreover, does the measurement in economic terms affect the perception of the heritage assets in cultural terms?

2.2 *The measurement of heritage assets*

Placing a financial value on a heritage asset is sometimes unproblematic, (experts at the Antiques Road Show (a British television program) provide immediate valuations); sometimes difficult, (Nelson's Column in Trafalgar Square); sometimes impossible, (the Rosetta stone in the British Museum). In accounting, a number of approaches to the valuation of assets is commonly adopted, most notably historical cost, replacement cost, fair value and value in use; but all have particular problems in relation to heritage assets.

Historical cost is adopted on acquisition of assets, but often heritage assets have not been purchased in recent years (if ever): they are frequently bequeathed or donated. Historical cost is therefore often unavailable or irrelevant. Replacement cost is often adopted for specialist assets but heritage assets are largely irreplaceable and unique. The cost of reconstructing Stonehenge, for example, would be considered by most people to be a figure with very little meaning. Fair value or market value assumes there is a market for the same or similar assets. Even where this is the case, (e.g. there may have been recent sales of a Lucien Freud portrait), the prices are often volatile and each asset (painting) would have differing subjective value. An income approach such as value-in-use is often inappropriate because many heritage assets

are freely available or subsidised because of their cultural, social or educational benefits. Furthermore there are often externalities such as tourist income generated by those visiting the locality in order to view the asset.

All the common methods of accounting measurement are problematic in relation to heritage assets. But, even if economic measurement could be reliably determined, is it appropriate for assets held primarily for their 'contributions to knowledge and culture' to be measured solely in economic terms? There exists considerable scepticism about measuring heritage assets for inclusion on financial statements. Hooper, Kearins and Green (2005) in a study of museums in New Zealand found that museum managers sought to reflect curatorship values in their annual reports and rejected the application of accounting standards requiring the inclusion of heritage assets.

The Getty studies that started in the US in the late 1990s (Getty Conservation Institute, 1999, 2000) acknowledged the lack of recognized and widely accepted methodologies for the assessment of cultural values and the difficulties of comparing the results of economic and cultural value assessments. The third Getty Report (Getty Conservation Institute, 2002) considers the valuation approaches of cultural heritage and, in particular, the economic value of cultural assets and sustainability. Others advocate alternative approaches to the enhancement of accountability which are more grounded in the underlying objectives of the entity. For example, Wild (2013) suggests an alternative approach based on models that have been adopted for cultures in which the profit motive and the enhancement of personal wealth are not key societal values: 'it is essential to develop and engage multiple, relevant measurement indicators' (Wild, 2013, p.13). Even in commercial accounting there are moves to consider wider values: the International Integrated Reporting Council (IIRC) has issued an integrated reporting framework (IIRC, 2013) that embraces financial, manufactured, social and relationship, intellectual, human and natural capital.

2.3 Accounting controversy and the developing regulatory framework

Globally there is wide diversity in accounting recognition and valuation of heritage assets; for example, expenditure on heritage assets is expensed on acquisition in US financial statements whilst in New Zealand and Australia capitalization is required. Despite difficulties in accounting valuation the trend is for standard setters and governments to increasingly require the inclusion of heritage assets in financial statements. The UK is part of this trend.

In 1999 the ASB issued FRS 15 Tangible Fixed Assets (ASB, 1999) which required that heritage assets should be capitalized at historic cost with a revaluation option. Operational heritage assets, for example a listed building used for office accommodation, would be valued on the same basis as other operational assets. For non-operational assets, most entities only valued purchases after 2001. The Financial Reporting Advisory Board (FRAB) reported to Parliament its concerns over the incomplete and inconsistent way heritage assets were reported in the financial statements of charities and public sector bodies including national museums and galleries (noted in Appendix 1 FRS 30 (ASB, 2009)).

In 2006 the ASB issued a discussion paper: ‘Heritage Assets – can accounting do better?’ (ASB, 2006a). The paper proposed the adoption of current value and the capitalisation of all heritage assets where practicable. This was embodied in Financial Reporting Exposure Draft (FRED) 40 (ASB, 2006b) which required current valuations for heritage assets (but allowed an opt-out by collection) together with extensive disclosures on heritage content and management arrangements. An ASB member claimed the Exposure Draft (ASB, 2006b) received an unprecedented level of response that showed furious rejection (Whittington, 2009). There was a clear preference for non-capitalisation but support for disclosures. The ASB backtracked and FRED 42 (ASB, 2008) largely reverted to the previous position but kept the disclosure requirements. Hence FRS 30 (ASB, 2009) required, as a minimum, historic cost capitalisation for acquisitions on or after 2001, and additional disclosures on how heritage assets are managed. To encourage a valuation approach, FRS 30 allowed entities to use internal valuations. The standard was effective from 1st April 2010 and the requirements were subsequently embodied in FRS 102 (FRC, 2013) which includes a section on heritage assets: they are to be recognized in the financial statements using either the cost or revaluation models, as for property, plant and equipment. Capitalisation is required where practicable; that is, where the cost of obtaining the information is less than the potential benefits to users.

UK local authorities and central government have adopted UK GAAP modified for the public sector (Ellwood 2003). The modifications, which are under the overview of the Financial Reporting Advisory Board (FRAB), are set out in the Government’s Financial Reporting Manual (FReM) and the Code of Practice on Local Authority Accounting in the UK,² (developed by the Chartered Institute of Public Finance and Accountancy and Local Authority (Scotland) Accounts Advisory Committee (CIPFA/LASAAC)). From 2009/10 central government departments, and in 2010/11 local government, moved to reporting with International Financial Reporting Standards (IFRS). However, a hierarchy of accounting frameworks is adopted: where IFRS is silent on an issue, International Public Sector Accounting Standards³ (IPSASTM) are adopted and if both IFRS and IPSASTM are silent on an issue then UK GAAP applies (FRAB, 2009). Both IFRS and IPSASTM are largely silent on the accounting for heritage assets. Therefore in relation to heritage assets the government accounting manuals and the local authority accounting code include an adaptation of FRS 30 (ASB, 2009). The local authority accounting code (CIPFA/LASAAC, 2011) adopted FRS 30 for 2011/12. Heritage assets are recognized on the balance sheet and measured at cost or current value where practicable.

3 The research frame

We develop a frame of analysis based on scientific observation theory applied within the socially constructed world of accounting. Hines (1988) argues that whilst the common perception may be that accountants serve to communicate reality, they also construct reality.

² Hereafter referred to as ‘the local authority accounting code’

³ The International Public Sector Accounting Standards Board® (IPSASB®) develops International Public Sector Accounting StandardsTM (IPSASTM), accrual-based standards used for the preparation of general purpose financial statements by governments and other public sector entities around the world. (<http://www.ifac.org/public-sector> - accessed 29 April 2015)

Accounting has constructed a reality – it has placed heritage assets within the accounting boundary, recognised them as an element to be included in the financial statements and determined how they are to be valued. Accounting has defined heritage assets as accounting assets despite identifying such assets as having ‘historical, artistic, scientific, technological, geophysical or environmental qualities...held and maintained principally for ...contribution to knowledge and culture’ (ASB, 2009, p.2). They do not necessarily have future inflows of economic benefits like other accounting assets, but have benefits in terms of knowledge and culture. Nevertheless the accounting standard setter has determined they are to be recognized and valued in economic terms. ‘We make them real, by recognizing them as real’ (Hines, 1988, p.252).

However, is this reality changed by observation, the effect of measurement? Does observing heritage assets (measuring) their value affect the perception of the heritage asset? In particular, does its perceived cultural value change? ‘Having the full picture – a true, a fair view of something – depends on people deciding that they have the full picture’ (Hines 1988, p.252). The standard setters may see the full picture as purely economic. To illustrate her arguments Hines not only uses a metaphor based on the story of Don Juan but also draws on a number of analogies from the physical sciences. We extend these analogies, by drawing on concepts from quantum physics, to explore the extent to which accountants’ efforts to recognise and place an economic value on cultural assets affects our perception of their cultural value and has consequences – it changes reality.

The notion that measurement and observation of one characteristic or feature might affect other qualities of an object has echoes in the world of physical science. Since the time of Galileo scientists proceeded on the basis that they could be passive observers of the natural world and that their observation would have no impact on the object being observed. ‘The belief in an external world independent of the perceiving subject (observer) is the basis of all natural science’ (Albert Einstein – widely cited as in, for example, Herbert, 1987, p.201). However, even at the level of classical physics this did not entirely hold. For example it is hard to measure the pressure of gas in a chamber without releasing some of that gas and it is hard for a mercury thermometer to measure the temperature in a room without some exchange of heat with the room. In the social sciences, the Hawthorne effect, where workers altered their rate of work when being observed, also demonstrated that the act of observation often affects the response of that which is being observed (Gillespie, 1991).

In physics this observation effect became a focus of theoretical development as physicists explored the nature of matter and light and observed that light, which had previously been conceived of as a wave, also exhibited behaviours associated with particles. Similarly sub-atomic particles such as electrons sometimes behaved like waves. This led to the concept of wave-particle duality and the development of quantum physics, in which scientists such as Werner Heisenberg and Erwin Schrödinger played a key part. Indeed their original theories were developed as competing theories to explain wave-particle duality, but later both theories, which became known as quantum mechanics, were shown to be equivalent in that they made identical predictions (Lightman, 2000, p.179).

Heisenberg's uncertainty principle, which is today seen as a central tenet of quantum theory, shows that the greater precision with which we measure the position of a particle, the less precision we can achieve in determining its momentum (and vice versa) (Gribbin, 1984, p.119 and p.156 and Gribbin, 1995, p.16). 'We cannot know, as a matter of principle, the present in all its details.' (Werner Heisenberg as cited in Gribbin, 1984, p.157 and Gribbin, 2002, p.520).

Schrödinger was simultaneously developing equations which describe how a quantum wave moves and which provide a fundamental underpinning for quantum physics. These waves are not physical waves like waves in a pond but waves of probability that describe the probability of finding a particle such as a photon or electron in a particular place. The electron could be here, or there, or indeed, with lower probability, almost anywhere in the universe. The standard interpretation however (known as the Copenhagen convention, after Neils Bohr who worked in Copenhagen, (Gribbin, 1995, p.10) was that quantum entities, such as photons and electrons, do not exist as either particles or waves but that these two states co-exist, (a concept known as superposition (Gribbin, 1995, p.21), until the act of observation. Depending on the nature of the observation, if the purpose of the observation is to observe wave behaviour, that is what will be revealed; if the purpose of the observation is to observe particle behaviour, then that will be revealed. The act of observation forces nature to 'collapse' into one state or the other. However, many eminent scientists including Einstein and Schrödinger considered this to be flawed. How could the world not be 'real' until observed? To illustrate some of these problems in 1935 Schrödinger constructed his thought experiment commonly referred to as 'Schrödinger's cat' (Gribbin, 1995, pp. 19-21).

Schrödinger's cat is a famous illustration of the principle of superposition and serves to demonstrate the apparent conflict between what quantum theory tells us is true about the nature and behaviour of matter on the microscopic level and what we observe to be true about the nature and behaviour of matter on the macroscopic level, i.e. what is visible to the unaided human eye. Schrödinger asks us to imagine a box that contains a radioactive source, a detector that records the presence of radioactive particles, a glass bottle containing a poison such as cyanide, and a live cat. The apparatus in the box is arranged so that there is a 50:50 chance that one radioactive particle will be emitted. If such a particle is emitted, the detector triggers a relay mechanism which results in the glass chamber being shattered and the cat being killed. If a particle is not emitted, the cat lives. We have no way of knowing the outcome of this experiment, whether the cat is alive or dead, until we look inside the box. Until the action of observation however, the Copenhagen interpretation suggests that the two states, dead and alive, are in superposition. The cat is both alive and dead, neither alive nor dead. (Adapted from Gribbin, 1984, pp. 204-205). This, according to Schrödinger was one of the fundamental flaws of the Copenhagen interpretation, because how could a cat be both dead and alive at the same time?

This situation is sometimes called quantum indeterminacy or the observer's paradox: the observation or measurement itself affects an outcome, so that the outcome as such does not exist unless the measurement is made. (That is, there is no single outcome unless it is observed (see for example: Kramer, 2013 and Gribbin, 1984, pp.170-172). The experiment was designed

to illustrate the flaws of the Copenhagen interpretation of quantum mechanics, i.e. that a particle exists in all states at once until observed.

A further problem concerns the role of the observer and the boundaries of the experiment. Neils Bohr argued that we have to consider the whole experiment and that this includes the observer (Gribbin, 1995, p.14). But what if the observer is in a bigger sealed box? Does the observer not exist unless another observer opens that box? This has led some, such as Stephen Hawking, to become concerned that this approach implies that the universe exists only in the presence of an external observer (Gribbin, 1995, p.16). In other words, everything in the universe exists only because we are looking at it.

This question of the role of the observer raises deeper philosophical issues about the nature of reality which has exercised the minds of great philosophers since the age of enlightenment. Those such as Locke (1632-1704) and Berkeley (1685-1753), for example, questioned whether observed objects have an existence independent of our observation of them. (Harré, 1972, p.70). The existentialists such as Sartre (1905-1980) and Camus (1913-1960), however, have argued more recently that human beings are not detached observers of the world but instead exist in the world, being defined by their interactions with it. (Solomon, 1972, Ch.7; Warnock, 1970, Ch. 5)

Wave-particle duality therefore raises questions about our perceptions of the world and about our attempts to describe the world. Quantum physics shows us that the imagery associated with words such as 'particle' and 'wave' are not adequate to the task of describing quantum phenomena as we observe them through our scientific instruments. We have no visual picture of how a photon or electron can be in more than one place at a time. This is the problem revealed by Heisenberg's Uncertainty Principle. To know the velocity of a quark⁴, for example, we must measure it, and to measure it we are forced to affect it. The same goes for observing the object's position. Even the slightest interference can cause sub-atomic particles to behave differently. Hence quantum physicists are forced to create thought experiments based on the observations from the real experiments conducted at the quantum level. These thought experiments are meant to aid our understanding of theory that is difficult to articulate because it is beyond the realms of everyday human experience.

We use these theories of how measurement affects reality to interpret the application and consequences of the accounting for heritage assets. The accounting standard setters, the government and professional bodies have determined a reality in which heritage assets are brought into the financial statements and measured in terms of economic value. The designers of the accounting are defined by the world with which they interact. In recognizing heritage assets on financial statements the accounts preparers must measure the economic value of the heritage asset and communicate it to the users of accounts. But as Heisenberg commented: 'the measuring device has been constructed by the observer' (Heisenberg, 1959, p.57). The heritage assets have both cultural and economic values (the two states co-exist, i.e. superposition) but is there an observer's paradox such that this observation of economic value affects the cultural

⁴ An elementary sub-atomic particle

value? Like Schrödinger's cat do economic and cultural value both exist until observation (recognition and measurement) and then only one is seen? The cat is alive or dead. On the other hand, Heisenberg's uncertainty principle would suggest that both economic value and cultural value can co-exist, but to know more about the heritage asset (by communicating its value on the balance sheet) we must measure it, and to measure it we are forced to affect it.

4 Research Methods

To investigate the application and effect of accounting for heritage assets we adopt a case study approach to gain a depth of understanding. The new accounting requirements of recognition, measurement and disclosure apply to a diverse range of entities holding substantially different levels of heritage assets. The first case is a national gallery that receives substantial government funding: the National Portrait Gallery. The second case is a local authority: the London Borough of Tower Hamlets.

The National Portrait Gallery was founded in 1856⁵. Today it is among the largest and most prestigious collections of portraits in the world. As well as a permanent display of portraiture from the sixteenth century to the present day, the Gallery provides a wide range of special exhibitions and displays. The Gallery's main objectives, derived from the Museums and Galleries Act 1992, are to promote, through portraiture, an appreciation and understanding of the men and women who are important to British history and culture and to promote the appreciation of portraiture in all media (National Portrait Gallery, 2009, p.1). The Gallery is a charity and a non-departmental public body; its financial statements are produced under the charities' Statement of Recommended Practice (Charity Commission, 2005) and HM Treasury's Financial Reporting Manual (FReM)⁶ and are consolidated into the financial statements of the Department of Culture, Media and Sport.

The London Borough of Tower Hamlets provides a range of services including housing, education, social care, leisure and culture. It is a local authority with severe challenges. For example: it has the highest rate of child poverty in the UK 53% (29,680 children); 17% of households have income below £15k; over 16,000 (12.7%) residents of working age are unemployed (the third highest rate in London) (London Borough of Tower Hamlets, 2012a; 2013a; 2013b, p.22). Its key priorities are, not unsurprisingly: housing, employment, community safety and services for young people (London Borough of Tower Hamlets, 2014). The financial statements follow the guidance on accounting for heritage assets produced by LASAAC/ CIPFA⁷ (2011).

Our cases therefore comprise two organisations following the recent accounting requirements for heritage assets of FRS 30 Heritage Assets (ASB, 2009) as specified and adapted for their reporting entity. The two cases are chosen for their diversity – to draw out the issues surrounding recognition, measurement and disclosure of heritage assets rather than

⁵ Information about the history of the Gallery has been sourced from <http://www.npg.org.uk/about/history.php>

⁶ See: <https://www.gov.uk/government/collections/government-financial-reporting-manual-frem>. (Accessed 7 January 2015)

⁷ LASAAC – Local Authority (Scotland) Accounts Advisory Committee. CIPFA – Chartered Institute of Public Finance and Accountancy.

their generalizability. We explore how the precision in measurement of economic value may affect cultural value.

We use a combination of documentary analysis and semi-structured interviews conducted between September 2013 and January 2014. The documentary analysis includes reviews of annual reports, press reports, and website information together with documents setting out the development of the accounting standards and subsequent guidance. The three semi-structured interviews were with senior finance staff at the case study sites and with a representative of LASAAC. Points relating to these interviews were followed up through e-mail correspondence.

5 Accounting for heritage assets: the cases

5.1 *The National Portrait Gallery*

The Gallery received £7.4m. from the government, out of a total annual income of £17.4m. in 2012/13. Despite its prestigious collection of portraiture, it shows a remarkably low value for heritage assets in its balance sheet (Table 1), only £13m. of £65m. of total fixed assets (20%) are represented by heritage assets (National Portrait Gallery, 2013, p.44).

Table 1: National Portrait Gallery

Consolidated Balance Sheet Extract at 31st March 2013

	<i>2013</i>	<i>2012</i>
	<i>£000</i>	<i>£000</i>
<i>Fixed assets</i>		
Tangible assets	48,897	50,299
Heritage assets	13,216	11,973
Available for sale financial assets	3,068	2,715
	<u>65,181</u>	<u>64,987</u>

The accounting policies disclose ‘Heritage assets are capitalised where cost and value information is available’ (National Portrait Gallery, 2013, p.48). However, in effect, this is a very small proportion of the Gallery’s holdings. The Gallery has a vast collection of portraiture as explained in its annual report:

The Primary Collection of paintings, sculpture, miniatures, drawings, prints and photographs contains some 11,800 portraits of the most famous people in British history. Of these more than 4,100 are paintings, sculptures and miniatures, approaching 60% of which are regularly displayed at the National Portrait Gallery or elsewhere, including loans outside the UK. In addition, there are some 7,700 works on paper, shown on a rotating basis of about 300 items a year. Normally items not on display can readily be made available for viewing (National Portrait Gallery, 2013, p.57).

Only heritage assets acquired from 2001 onwards are capitalised. It is estimated that about 4% of the primary collection of approximately 12,000 portraits is capitalised and only

about 0.1% of the reference collection of a further 85,000 portraits. A further collection of 250,000 photographs is also held. Only 60% of the primary collection is on display at any one time (National Portrait Gallery, 2013, p.58).

The Gallery's Director of Finance and Planning gave the following reasons for the non-capitalisation of its heritage assets (Hanks 2010):

- It would take an estimated 27 person years and cost £1.3m to capitalise all items
- There was a high likelihood that some valuations would not reflect current market prices (lack of expertise, volatile markets)
- The usefulness of the valuations to the reader is questionable and the costs would be disproportionate to the benefit
- Such a large value if entered into the balance sheet could give the misleading impression that the Gallery was an asset rich institution, which might also prove a disincentive to potential donors
- The Gallery is prohibited from trading in its collection of assets and therefore the value does not represent a pool of financial resource which the Gallery could realise

The Comptroller and Auditor General no doubt accepted such arguments as he gave an unqualified audit opinion and stated 'I have no observations to make on these financial statements' (National Portrait Gallery, 2013, p.42).

5.2 *Tower Hamlets Council*

The London Borough of Tower Hamlets had £1340.2m. annual revenue in 2012/13 of which £880m. came from government grants and subsidies (London Borough of Tower Hamlets, 2013c). In its financial statements as at 31st March 2013 ((London Borough of Tower Hamlets, p.10) it reported heritage assets of £4.8m., representing only 0.2% of all fixed assets (Table 2):

Table 2: Tower Hamlets London Borough Council (LBC)

Consolidated Balance Sheet Extract at 31st March 2013

	<i>2013</i>	<i>2012</i>
	<i>£000</i>	<i>£000</i>
<i>Long term assets</i>		
Tangible assets	1,753,825	1,850,505
Heritage assets	4,810	4,799
Long term debtors	672	768
	<u>1,759,307</u>	<u>1,856,072</u>

The local authority accounting code changed the treatment of heritage assets from 2011/12 and required local authorities to include heritage assets at current value where practicable (London Borough of Tower Hamlets, 2013c, p.19). The annual report stated that

there were 101 works of art across the borough, however, only four were above a materiality threshold of £50,000: civic regalia, two sculptures and one painting. These were included at recent valuations from art experts (London Borough of Tower Hamlets, 2013c, p.66). The most important asset in financial terms is the Draped Seated Woman (1957-8) by Henry Moore, a bronze sculpture measuring approximately 3m. by 2m. by 2.8m. and weighing approximately 1.5 tonnes. The sculpture represents an old working class woman in the war years known as ‘Old Flo’.

In 2012, shortly after publishing its annual financial statements, Tower Hamlets Council decided to sell the sculpture. A press release issued by Tower Hamlets Council (7 November 2012) reported that the Council had ‘made the difficult decision to sell the Henry Moore sculpture, Draped Seated Woman.’ The statue was purchased in 1962 for £7,400 by London City Council. It was sited originally on the Stifford Estate in Tower Hamlets and ownership transferred in 1986. However, for the last 15 years, after being repeatedly vandalised, ‘Old Flo’ was sent ‘on holiday’ to a sculpture park in Yorkshire. The Stifford Estate has subsequently been demolished. An online poll carried out by a local newspaper (cited on the Council’s webpage⁸) indicated strong support for the sale of the sculpture with 55 per cent in favour to release much needed funds and only 18 per cent supporting its siting in Victoria Park in Tower Hamlets.

The sale decision has been controversial with questions asked in Parliament. Councillors have defended their decision. Councillor Rania Khan, cabinet member for Culture, said:

I find that Tower Hamlets is being judged rather harshly by the art world with regards to our decision to sell the sculpture. We are not the first council to do this in order to benefit our residents and I am sure we will not be the last. I see first-hand the difficulties residents are faced with in the borough. Henry Moore said he wanted his sculpture to benefit the residents of the borough and through the sale the council can achieve this in a tangible and practical way. Last year Bolton Council put up 36 works of art to be sold including works by Millais, Picasso and Hutchison. (London Borough of Tower Hamlets, 2012b)

Just what part the accounting valuation and disclosure played in the decision is unknown. When we interviewed the financial accountant at Tower Hamlets we were told at the outset that no questions would be answered about ‘Old Flo’.

5.3 Accounting regulation and heritage assets focused on economic value

The recognition and measurement of heritage assets in public sector organizations (and in charities consolidated into public sector accounts such as the National Portrait Gallery) is overseen by the Financial Reporting Advisory Board (FRAB). The Chartered Institute of Public Finance and Accounting (CIPFA) and the Local Authority Scotland Accounts Advisory

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http://www.towerhamlets.gov.uk/news_events/news/2012/november/henry_moore_statue_to_be_sold.aspx
(accessed 2 February 2015)

Committee (LASAAC)⁹, provide the Code of Practice on Local Authority Accounting. This code serves as the basis for the preparation of local authority financial statements. The LASAAC representative stated that if FRAB require that heritage assets should be accounted for then ‘that’s what will happen.’ However, LASAAC/CIPFA determine how FRAB’s requirements are implemented. FRAB is a staunch advocate of adoption of commercial accounting with minimal change. The LASAAC representative went on to explain:

Underlying the implementation of FRS 30 is not a concern for comparisons and benchmarking but more information about each individual local authority and the management of its heritage assets.

Similarly, LASAAC’s stated aim is ‘to ensure that the financial stewardship and management of heritage assets is properly presented...’ (LASAAC, 2012, para. 9). Therefore heritage assets are to be recognized and valued, but it would seem that observation of heritage assets does not require adherence to strict rules on recognition and economic values.

Where an authority has information on the cost or value of a heritage asset, the authority shall recognize the asset.....Where assets have previously been capitalized or are recently purchased, information on their cost or value will be available. Where this information is not available, and cannot be obtained at a cost commensurate with the benefits to users of the financial statements, the assets will not be recognized in the Balance Sheet. Disclosure shall be made in respect of heritage assets not recognized in the Balance Sheet.....

Valuations may be made by any method that is appropriate and relevant. There is no requirement for valuations to be carried out or verified by external valuers, nor is there any prescribed minimum period between valuations (CIPFA, 2012, para. 4.10).

The accounting guidance makes no mention of cultural value though it acknowledges that authorities preserve heritage assets in trust for future generations because of their cultural, environmental or historical associations. The accounting requirements are concerned with achieving precision in economic value, but the observation and reporting of economic value may affect its cultural value (there is quantum indeterminacy).

5.4 The purpose of accounting for heritage assets

Both the National Portrait Gallery and Tower Hamlets London Borough Council saw little purpose in the valuation and disclosure of heritage assets. At the Portrait Gallery the argument against capitalisation of heritage assets had been well-rehearsed; previous moves had been similarly resisted. The financial statements showed a very partial view; only assets acquired after 2001 were capitalised (4% of the primary collection). The Director of Finance and Planning saw no useful purpose from including items at economic value in the annual

⁹ The Local Authority (Scotland) Accounts Advisory Committee (LASAAC) comprises representatives of the Chartered Institute of Public Finance and Accountancy (CIPFA), the Association of Chartered Certified Accountants (ACCA), the Institute of Chartered Accountants in Scotland (ICAS), Audit Scotland and the Scottish Government. CIPFA-LASAAC produces the UK-wide ‘Code of Practice on Local Authority Accounting in the United Kingdom.

report – ‘we do not trade’. At Tower Hamlets the valuation of the limited number of heritage assets above the materiality threshold of £50,000 was low, only four, but even then the disclosure of information was sparse and the items were not explained (there was no mention of Henry Moore, the title of the work or its location). The Chief Accountant when interviewed explained that they did the minimum to meet the compliance level to satisfy the auditor. He felt to do more was unnecessary and indeed could be harmful – it could be “a thieves’ charter” were they to identify and value individual heritage assets and disclose their locations. Both organisations receive substantial government funds but regard the accounting requirements to capitalise heritage assets as serving little purpose. The concern of the FRAB and the ASB was that there was insufficient precision in measuring economic value – the accounts provided a partial view of assets. However, both case study organisations saw the economic view of heritage assets as having little importance or meaning.

5.5 *Economic value versus cultural value*

Both organisations distinguished economic value from cultural value. The Director of Finance and Planning at the National Portrait Gallery explained his understanding of the difference between economic and cultural value:

We are holding a collection for the nation. The thing is, the value of that collection is not so much in the monetary value of each individual piece, because you can have a portrait that is not particularly valuable, but it is the only portrait of that one person in history and therefore it is of much greater value than something painted by Sir Joshua Reynolds of a particular person, there are many, many good portraits of that particular person elsewhere say around the country, so in terms of an historic record the Joshua Reynolds is not quite worth as much as the rather small, obscure painting.

Similarly the Chief Accountant at Tower Hamlets LBC said the financial value of many of the paintings the council held have value below £50,000 but some of the paintings held of river boats on the Thames may be of much greater cultural significance than a painting valued over £50,000 and included in the heritage assets figure on the balance sheet.

The accounting values based on cost or market values are not considered suitable proxies for cultural value. Measuring the economic value does not explain or correspond to cultural value. A heritage asset can have relatively high cultural value compared to its economic value. It is also conceivable that observing its cultural value (e.g. setting out the cultural significance of a painting) may increase its economic value.

6 Discussion and interpretation

6.1 *Accounting reality*

The accounting regulators, the ASB, FRAB and LASAAC, structured an accounting reality where heritage assets are recognised, valued and disclosed in financial statements. According to Hines (1988) the regulators had decided what was needed to provide ‘the full picture’. The ASB maintained the view that heritage assets are accounting assets although the economic benefits ‘are primarily in the form of service potential rather than cash flows’ and are important to an entity’s financial position. After strong objections to FRED 40 (ASB,

2006b) it retreated to the position of requiring recognition of assets recently acquired, a current value option and improved disclosure. Nevertheless recent changes have provided greater visibility of the economic value of heritage assets particularly through the adoption of FRS 30 (ASB, 2009) in the local authority accounting code (CIPFA/LASAAC, 2011).

At the National Portrait Gallery the collection of portraiture grows each year, but the Gallery, like many charities,¹⁰ does not capitalise heritage assets other than those acquired since 2001. The National Trust does not include any heritage assets on its balance sheet at all as this is permitted in the National Trust Act 1971 (National Trust, 2013, p.36). However, the Code of Practice on Local Authority Accounting 2011/12 reinforced FRS 30 (ASB, 2009) and required local authorities to separately disclose and place current values on heritage assets where practicable. Tower Hamlets places current values on heritage assets above a materiality level of £50,000 but provides only limited disclosure. Nevertheless, shortly after publication of the financial statements for 2011/12 the decision was taken to sell its most financially valuable heritage asset, 'Old Flo'. More widely, there has been a loss of heritage assets from local authority ownership throughout the UK. Sales of art have been frequently reported in the press and the Arts Council and other museum authorities have drawn up new guidelines for councils thinking of selling art to raise funds (Arts Council, 2014). The Green Balance Report (2012) provides survey evidence that just over a half of local authority asset managers had sold or leased heritage buildings in the last five years and, looking ahead to the next five years, just under half the asset managers expected to sell or lease heritage buildings. When local authorities and other public and charitable bodies dispose of heritage assets, the cultural value may be lost to the public depending on how they are divested. The UK government is encouraging community based organisations and volunteers to play an increasing role in improving local areas ('the new localism'). One aspect of the Localism Act 2011 is that local authorities may transfer ownership; and responsibility for heritage assets to community organisations (English Heritage, 2012). However, where heritage assets were disposed of the overwhelming reason according to the Prince's Regeneration Trust (2014) was that local authorities lacked the resources to maintain them and 'if the asset had a positive economic value, councils faced pressure to recoup the highest market price for such sales....They made only limited use of their discretionary power to make disposals at less than open market value'.

It appears that placing an economic value on a heritage asset may dominate other value considerations. Constructing an accounting reality where heritage assets are recognised, measured and disclosed in economic terms has the potential to have real consequences. These consequences may depend on issues such as the focus of the public or charitable entity and the ability of the locality to fund the transfer of the asset into a community trust. Tower Hamlets Council, as in other local authorities has competing demands on its limited resources and is in one of the most deprived areas of London. Further work is necessary to establish whether the sale of heritage assets has led to a greater loss of cultural value in deprived areas.

¹⁰ See for example, English Heritage's accounting policy for pure heritage assets, (English Heritage, 2013, p.42).

6.2 Accounting for heritage assets and the paradox of Schrödinger's cat

Heritage assets have both an economic value and a cultural value (the cat has two possible states, dead or alive). Recent accounting changes require measurement of the economic value (one state). Does this mean that once measured in financial terms the cultural value is lost? The cat is dead. Even if the asset is sold and there is a loss in public cultural capital, (the cat is dead) this could have been due to the other items in the box e.g. austerity (the severe need to find funds to meet council priorities) or new localism. Initial analysis seems to support the proposition that the act of measuring a heritage asset in economic terms (the accounting for the asset on the balance sheet) may have played a part, in reducing public access to cultural value. Observing or measuring an economic value may have prompted decisions and changed 'reality' to merely one state, in line with the analogy as set out in Schrödinger's cat. However, this particular thought experiment is not fully applicable, although economic (market) value may be distinguished from cultural value: there are two states as clearly indicated in the case studies, observing an economic value does not *necessitate* the loss of cultural value and the death of the cat. The two values (states) in this instance are not mutually exclusive but only one is observed in the Balance Sheet. Schrödinger, however, used this thought experiment to reveal flaws in quantum theory using everyday language and experience.

The central tenet of quantum theory, Heisenberg's uncertainty principle provides further interpretive power. The greater the precision with which we measure one phenomenon (the economic value), the less precision we achieve in determining the other phenomenon (the cultural value). In measuring the economic value of a cultural asset such as 'Old Flo' there is perhaps a loss in perception of the cultural value of the asset. Economic valuation remains subject to the criticism that 'the dynamic of calculativeness drives out culture and singularities' (Karpik, 2010, p.6). Moreover, the case study interviews clearly show that measurement of economic value is not indicative of cultural value and vice versa.

There are various dimensions of the value of cultural heritage: individual versus collective value (Hutter and Rizzo, 1997; Peacock 1998), private versus public value. There are approaches such as contingent valuation that could be used to place a non-market value on cultural assets. Hanemann (1994) argues that when public valuation is the object of measurement, a well-designed contingent valuation survey is one way of consulting the relevant experts – the public itself. However, the public must imagine a market for goods whose defining economic condition is not to have a market (Fourcade, 2010). Fourcade (2010) also suggests it is fallacy to assume individual references can be aggregated to give total social values. Furthermore, it cannot be assumed that what people are willing to pay as consumers is akin to their support for funding as a citizen (Mulgan et al., 2006). Hausman (2012) argues that contingent valuation is laden with so many problems as to be 'hopeless'. Nevertheless, contingent valuation studies have started to be applied to cultural heritage (Mourato and Mazzanti, 2002). Further research is necessary to determine whether measuring the cultural value will affect economic value. As in Heisenberg's uncertainty principle, it is quite plausible that measuring or establishing the cultural value of a heritage asset such as a work of art could impact on its economic value; the two values would not be mutually exclusive (as in

Schrödinger's cat paradox) or necessarily have an inverse relationship, but increasing the precision of one may affect the other.

In recent years there has been a move away from merely reporting in economic terms. The International Integrated Reporting Council (IIRC, 2013) considers value as created for many forms of capital (financial, manufactured, intellectual, social and relationship, human and natural). Cultural capital is not specifically mentioned but clearly cultural and economic values can be considered together. We argue economic valuation does not obviate the need for cultural value – it is not a matter of the cat being alive or dead – and more research is needed to establish how measuring one 'capital' will affect the other 'capitals'. We can surmise that in line with Heisenberg's uncertainty principle, increasing the precision of one phenomenon may affect our perception of another phenomenon. The effect will also relate to how the 'reality' is constructed. In accounting we see this as the accounting boundary, recognition and measurement. The accounting constructs relate largely to an economic business model whereas in quantum theory the analogy is the position of the observer and how he interacts with the observed. As Heisenberg (1959, p.57) comments, 'we have to remember that what we observe is not nature in itself but nature exposed to our method of questioning'. In the world of quantum physics and the constructed reality of accounting the item (heritage asset) has no value (economic or cultural) if it is hidden away and not observed or measured.

7 Conclusions

The accounting for heritage assets can be explored in terms of a structured reality and insights can be gained from interpretative theories drawn from quantum physics. Heritage assets become part of an accounting reality, 'we make them real, by recognizing them as real' (Hines, 1988, p.252). Within this reality we relate observation theory to the accounting measurement of cultural assets. Recent changes in accounting requirements for heritage assets have required the measurement of their economic value and their inclusion in annual reports and financial statements. Although sales of heritage assets by local authorities have been common around the years of the accounting change for heritage assets, it is difficult to know what has prompted the sales. We use case studies to investigate the intrusion of economic value into the measurement of cultural assets. The National Portrait Gallery used its well-rehearsed arguments against application of accounting measurement and continues to increase its extensive collection of portraiture. The London council in a deprived borough, Tower Hamlets, decided to sell its major heritage asset, a Henry Moore sculpture.

The study highlights that more consideration of how cultural heritage can be measured other than in financial (market) values is important. Future decisions are required: the National Portrait Gallery presumably cannot continue to extend its holding of portraiture without limit; local authorities must decide whether to divest cultural assets. Appropriate decision making requires consideration of both cultural and economic value. Our limited case studies clearly show the two may not be of the same magnitude and inclusion of only economic value is considered irrelevant and possibly harmful. Unlike Schrödinger's cat, it is possible to have both economic value and cultural value, but accounting at present merely observes the economic value. However, continuing our thought experiments from quantum physics, the measurement

of economic value will affect the perception of other values (Heisenberg's uncertainty principle). The stance taken by the observer will also be influential.

Further work is necessary to consider how both the economic and the cultural state of heritage assets can be reported. Both the National Portrait Gallery and Tower Hamlets Council provide cultural services to the public, as such, a possible alternative approach could be public valuation. Approaches to public valuation may be more useful for accountability and decision-making. As integrated reporting develops, cultural value could feature alongside financial and other capitals. Thought experiments from quantum physics can help to illuminate possible measurement issues and interactions. Quantum indeterminacy suggests that the greater precision in which we measure economic value (the position of the particle) the less precision we can achieve in determining its cultural value (momentum) and vice versa – hence we cannot, as a matter of principle, know value in all its details but integrated reporting moves accounting into this arena. Accounting reality has merely observed economic value, but Heisenberg's argument for atomic experiments can be read in the context of the economic and cultural values of heritage assets:

By playing with both pictures, by going from one picture to the other and back again, we finally get the right impression of reality (Heisenberg, 1959, p.50).

We considered whether observing (measuring) economic value in the financial statements changed the 'impression of reality' using analogies from quantum physics, in particular, Schrödinger's thought experiment. Did observing economic value 'kill the cat'? Like Schrödinger's cat there were other items in the box and the box provides a boundary from the wider world: we cannot say whether the sale decision at Tower Hamlets coincidentally happened shortly after the publication of financial statements and was driven by austerity or public policy (the new localism) rather than the accounting measurement. The theories help us to understand the interaction but cannot explain what happened between one observation and the next. Heisenberg (1959, p.52) explains that quantum theory 'does not allow a description of what happens between two observations.....the term 'happens' is restricted to the observation'. If the decision is made to sell heritage assets that may not mean 'the cat is killed'. Whether the public lose the cultural value will depend on how the divested asset is held and made available. To draw on quantum physics again, observation of the position or location of the heritage asset and the boundary of the experiment is necessary. There is a danger that accounting measurement will lead to a loss of cultural value, financial value will be realised, the cat is harmed and may die. However, the death depends on how the asset is divested and the safeguards made to ensure public access to culture – the cat may merely have 'moved position' and found a new home.

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9 References

- Accounting Standards Board (ASB). (1999a). Statement of principles for financial reporting. ASB Publications. <https://www.frc.org.uk/Our-Work/Codes-Standards/Accounting-and-Reporting-Policy/Accounting-Standards-and-Statements-issued-by-the/Statement-of-principles.aspx> (accessed 29 April 2015).
- Accounting Standards Board (ASB). (1999b). FRS 15 Tangible fixed assets. ASB Publications. <https://www.frc.org.uk/Our-Work/Publications/ASB/FRS-15-Tangible-Fixed-Assets/FRS-15-Tangible-Fixed-Assets.aspx> (accessed 29 April 2015).
- Accounting Standards Board (ASB). (2006a). Heritage assets: can accounting do better? ASB Publications. <https://frc.org.uk/Our-Work/Publications/ASB/Heritage-Assets-can-accounting-do-better.pdf> (accessed 29 April 2015).
- Accounting Standards Board (ASB). (2006b) Financial Reporting Exposure Draft 40: Accounting for Heritage Assets. <https://www.frc.org.uk/getattachment/bd173b19-cdd8-41cd-b14d-24d5fbce2ea2/Financial-Reporting-Exposure-Draft-Accounting-for.aspx> (accessed 29 April 2015).
- Accounting Standards Board (ASB). (2007). Statement of principles for financial reporting: interpretation for public benefit entities. ASB Publications. <https://www.frc.org.uk/Our-Work/Publications/ASB/Interpretation-of-the-Statement-of-Principles-for/Interpretation-Statement-of-Principles-for-Financi.pdf> (accessed 29 April 2015).
- Accounting Standards Board (ASB). (2008). FRED 42 Heritage assets. ASB Publications. [https://www.frc.org.uk/Our-Work/Publications/ASB/FRS-30-Heritage-Assets-\(June-2009\)/Financial-Reporting-Exposure-Draft-Heritage-Assets.aspx](https://www.frc.org.uk/Our-Work/Publications/ASB/FRS-30-Heritage-Assets-(June-2009)/Financial-Reporting-Exposure-Draft-Heritage-Assets.aspx) (accessed 29 April 2015).
- Accounting Standards Board (ASB). (2009). FRS 30 Heritage assets. FRC Publications. [http://frc.org.uk/Our-Work/Publications/ASB/FRS-30-Heritage-Assets-\(June-2009\)-File.pdf](http://frc.org.uk/Our-Work/Publications/ASB/FRS-30-Heritage-Assets-(June-2009)-File.pdf) (accessed 29 April 2015)
- Arts Council England, the Museums Association, CyMAL, Museums Galleries Scotland and Northern Ireland Museums Council. (2014). Disposal toolkit. http://www.artscouncil.org.uk/media/uploads/pdf/Disposal_Toolkit.pdf (accessed 8 January 2015).
- Barton, A. D. (2000). Accounting for public heritage facilities – assets or liabilities of the government? Accounting, Auditing & Accountability Journal, 13, 219-35.
- Barton, A. D. (2004). How to profit from defense: a study of the misapplication of business accounting to the public sector in Australia. Financial Accountability and Management, 20, 281-304.

- Barton, A. D. (2005). The conceptual arguments concerning accounting for public heritage assets: a note. *Accounting, Auditing & Accountability Journal*, 18, 434-440.
- Carnegie, G.D., & Wolnizer, P.W. (1995). The financial value of cultural, heritage and scientific collections: an accounting fiction. *Australian Accounting Review*, 5, 31-47.
- Carnegie, G.D., & Wolnizer, P.W. (1996). Enabling accountability in museums. *Accounting, Auditing & Accountability Journal*, 9, 84-99.
- Charity Commission. (2005). Accounting and reporting by charities: Statement of recommended practice. <https://www.gov.uk/government/publications/charities-sorp-2005> (accessed 7 January 2015).
- Chartered Institute of Public Finance and Accountancy/ Chartered Institute of Public Finance and Accountancy (CIPFA/LASAAC). (2011). Code of practice on local authority accounting 2011/12. (Current version can be purchased at: <http://www.cipfa.org/policy-and-guidance/technical-panels-and-boards/cipfa-lasaac-local-authority-code-board/ifrsbased-code-of-practice-on-local-authority-accounting-in-the-united-kingdom-the-code>. Accessed 29 April 2015).
- Ellwood, S. (2003). Bridging the GAAP across the UK public sector. *Accounting and Business Research*, 3, 105-121.
- Ellwood, S. (2009). Accounting for (a) public good: public healthcare in England. *Financial Accountability and Management*, 25, 411-433.
- Ellwood, S., & Newbury S. (2006). A bridge too far: a common conceptual framework for commercial and public benefit entities. *Accounting and Business Research*, 36, 19-32.
- English Heritage. (2012). Pillars of the community: the transfer of local authority heritage assets. <http://historicengland.org.uk/images-books/publications/pillars-of-the-community-the-transfer-of-local-authority-heritage-assets/> (accessed 29 April 2015).
- English Heritage. (2013). Annual report and accounts 2012/13. <https://www.gov.uk/government/publications/english-heritage-annual-report-and-accounts-2012-to-2013> (accessed 29 April 2015).
- Ferri, P., & Zan, L. (2014). Ten years after: the rise and fall of managerial autonomy in Pompeii. *Critical Perspectives on Accounting*, 25, 368-387.
- Financial Reporting Council (FRC). (2013). FRS 102 The financial reporting standard applicable in the UK and the Republic of Ireland. <https://www.frc.org.uk/Our-Work/Codes-Standards/Accounting-and-Reporting-Policy/Standards-in-Issue/FRS-102-The-Financial-Reporting-Standard-applicable.aspx> (accessed 7 January 2015).
- Financial Reporting Advisory Board (FRAB). (2009). 12th Report of the Financial Reporting Advisory Board: report for the period April 2008 to March 2009, HC671. London: The Stationery Office.

- Fourcade, M. (2010). Price and prejudice: on economics and the enchantment/ disenchantment of nature. In J. Beckett & P. Aspers (Eds.) *The worth of goods* (pp. 41-62). Oxford: Oxford University Press.
- Getty Conservation Institute. (1999). *Economics and heritage conservation*. R. Mason (Ed). Los Angeles.
- Getty Conservation Institute. (2000). *Values and heritage conservation*. E. Avrami & R. Mason (Eds). Los Angeles.
- Getty Conservation Institute. (2002). *Assessing the values of cultural heritage*. M. De la Torre (Ed.) Los Angeles.
- Gillespie, R. (1991). *Manufacturing knowledge. A history of the Hawthorne experiments*. New York, Cambridge University Press.
- Green Balance, Grover Lewis Associates Ltd. (2012). *Local authority heritage assets: current issues and opportunities*. Report to English Heritage and the Heritage Lottery Fund. <http://www.greenbalance.co.uk/sites/default/files/NT%20DisposalOfHeritageAssets%20Sept06.pdf> (accessed 29 April 2015).
- Gribbin, J. (1984). *In search of Schrödinger's cat*. London: Black Swan Books, Random House.
- Gribbin, J. (1995). *Schrödinger's kittens – and the search for reality*. London: Phoenix.
- Gribbin, J. (2002). *Science – a history: 1543-2001*. London: Penguin.
- Hanemann, W. M. (1994). Valuing the environment through contingent valuation. *Journal of Economic Perspectives*, 8, 19-43.
- Hanks, N. (2010). Capitalising the gallery's heritage assets. <http://www.npg.org.uk/about/corporate/gallery-policies/capitalising-the-gallery-heritage-assets.php> (accessed 7 January 2015).
- Harré, R. (1972). *The philosophies of science*. London: Oxford University Press.
- Hausman, J. (2012). Contingent valuation: from dubious to hopeless. *Journal of Economic Perspectives*, 26, 43-56.
- Heisenberg, W. (1959) *Physics and philosophy*. London: George Allen and Unwin.
- Herbert, N. (1987). *Quantum reality – beyond the new physics – an excursion into metaphysics*. New York: Anchor Books.
- Hines, R. D. (1988). Financial accounting: in communicating reality, we construct reality. *Accounting, Organizations and Society*, 13, 251-261.
- Hodges, R., & Mellett, H. (2003). Reporting public sector financial results. *Public Management Review*, 5, 99-113.

- Hood, C. (1991). A public management for all seasons. *Public Administration*, 69, 3-19.
- Hood, C. (1995). The “New Public Management” in the 1980s: variations on a theme. *Accounting, Organizations and Society*, 20, 93-109.
- Hooper, K. C., Kearins, K. N., & Green, R. (2005). Knowing the price of everything and the value of nothing: accounting for heritage assets. *Accounting, Auditing and Accountability Journal*, 62, 181-184.
- Hutter, M., & Rizzo, I. (1997). *Economic perspectives of cultural heritage*. London: Macmillan.
- International Integrated Reporting Council (IIRC). (2013). International <IR> Framework; <http://www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf> (accessed 7 January 2015).
- Karpik, L. (2010). *Valuing the unique: the economics of singularities*. Woodstock, UK: Princeton University Press.
- Kramer M. (2013). The physics behind Schrödinger’s cat paradox. *National Geographic* 13th August. <http://news.nationalgeographic.co.uk/news/2013/08/130812-physics-Schrödinger-erwin-google-doodle-cat-paradox-science/> (accessed 7 January 2015).
- Local Authority (Scotland) Accounts Advisory Committee/ Chartered Institute of Public Finance and Accountancy (LASAAC/ CIPFA). (2012). Guidance on accounting for heritage assets. <http://www.cipfa.org/regions/scotland/policy-and-technical/local-authority-scotland-accounts-advisory-committee/guidance-and-publications/heritage-assets> (accessed 29 April 2015).
- Lapsley, I. (2009). New Public Management – the cruellest invention of the human spirit. *Abacus*, 45, 1-21.
- Lightman, A. (2000). *Great ideas in physics*. New York: McGraw Hill.
- London Borough of Tower Hamlets. (2012a). Research Briefing 2012-01. http://www.towerhamlets.gov.uk/lgsl/901-950/916_borough_profile/research_and_briefings/income_and_poverty.aspx (accessed 24 February 2015).
- London Borough of Tower Hamlets. (2012b). Cuts force Moore sale. http://www.towerhamlets.gov.uk/news_events/news/november/henry_moore_statue_to_be_sold.aspx (accessed 8 January 2015).
- London Borough of Tower Hamlets. (2013a). Research Briefing 2013-04. http://www.towerhamlets.gov.uk/lgsl/901-950/916_borough_profile/research_and_briefings/income_and_poverty.aspx (accessed 24 February 2015).
- London Borough of Tower Hamlets. (2013b). Research Briefing 2013-09.

http://www.towerhamlets.gov.uk/lgs/901-950/916_borough_profile/research_and_briefings/labour_market.aspx
(accessed 24 February 2015).

London Borough of Tower Hamlets. (2013c). Annual report and accounts 2012-13.. Available from: http://www.towerhamlets.gov.uk/lgs/10001-10100/10067_annual_account.aspx (accessed 24 February 2015).

London Borough of Tower Hamlets. (2014). Strategic Plan 2014-15.
http://www.towerhamlets.gov.uk/lgs/800001800100/800022_community_plan/strategic_plan_2014-15.aspx (accessed 7 January 2015).

Mautz, R. K. (1988). Monuments, mistakes and opportunities. *Accounting Horizons*, 2, 123-8.

Micallef, F., & Peirson, G. (1997). Financial reporting of cultural, heritage and scientific collections. *Australian Accounting Review*, 7, 31-7.

Mourato, S., & Mazzanti, M. (2002). Economic valuation of cultural heritage: evidence and prospects. In: M. De la Torre (Ed.) *Assessing the Values of Cultural Heritage* (pp. 51-76). Getty Conservation Institute. Los Angeles.

Mulgan, J., Potts, G., Audsley, J., Carmona, M., de Magalhaes, C., Sieh, L., & Sharpe, C. (2006). Mapping value in the built environment: A report for the commission for the built environment. London: Young Foundation.

National Portrait Gallery. (2009). Strategic Plan 2009-2015
<http://www.npg.org.uk/assets/files/pdf/strategic-plan/NPGStrategicPlan2009-2015.pdf> (accessed 2 February 2015).

National Portrait Gallery. (2013). Annual Report 2012-13.
<http://www.npg.org.uk/about/corporate/accounts.php> (accessed 7 January 2015).

National Trust. (2013). Annual Report 2012/13. <http://www.nationaltrust.org.uk/about-us/annual-reports/> (accessed 29 April 2015).

Pallot, J. (1990). The nature of public sector assets: a reply to Mautz. *Accounting Horizons*, 4, 79-85.

Peacock, A. (1998). Does the past have a future? The political economy of heritage. London: Institute of Economic Affairs.

Prince's Regeneration Trust. (2014). Delivering regeneration through heritage: sustainable heritage toolkit. Available at:
www.princes-regeneration.org/sustainableheritage/introduction (accessed 2 February 2015).

Rowles, T. (1992). Financial reporting on infrastructure and heritage assets by public sector entities. Discussion Paper No. 17, Australian Accounting Research Foundation, Melbourne.

- Solomon, R.C. (1972). From rationalism to existentialism: the existentialists and their nineteenth century backgrounds. New York: Harper and Row.
- Warnock, M. (1970). Existentialism. London: Oxford University Press.
- Whittington, G. (2009). Heritage assets. Seminar presentation at Bristol University, 18th January 2009.
- Wild, S. (2013). Accounting for heritage, cultural and community assets – alternative metrics from a New Zealand Maori educational institution. Australasian Accounting Business & Finance Journal, 7, 1-22.
- Zan, L. (2002). Renewing Pompeii, Year zero. Promises and expectations from new approaches to museum management. Critical Perspectives on Accounting, 13, 89-137.